

Patent Case No.: 58961US002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:

ROSENFLANZ, ANATOLY Z.

Application No.:

10/666098

Group Art Unit:

1755

Filed:

September 18, 2003

Date

Examiner:

Elizabeth Bolden

Title:

CERAMICS COMPRISING AL2O3, Y2O3, ZRO2 AND/OR HFO2, AND

NB2O5 AND/OR TA2O5 AND METHODS OF MAKING THE SAME

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 **CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on;

Dear Sir:

Pursuant to 37 CFR §§ 1.56, 1.97, and 1.98, enclosed is a completed Form PTO-1449, citing references submitted for consideration by the Examiner. Copies of any cited foreign patents, non-patent literature, and unpublished US application documents are enclosed. Pursuant to the waiver in the Pre-OG Notice, dated July 11, 2003, copies of US patents and published US patent applications are no longer required and are not enclosed. It is respectfully requested that the Examiner initial and return the enclosed Form PTO-1449 to indicate that each reference has been considered.

It is believed that no fee is due; however, in the event a fee is required, please charge the fee to Deposit Account No. 13-3723.

Respectfully submitted,

By:

Gregory D. Allen, Reg. No.: 35,048

Telephone No.: (651) 736-0641

Office of Intellectual Property Counsel 3M Innovative Properties Company Facsimile No.: 651-736-3833

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First Named Inventor	Rosenflanz, Anatoly Z.		
Art Unit	1755		
Examiner Name	Elizabeth Bolden		
Attorney Case Number	58961US002		

HADE			U.S. Patent	Documents	
Exam. Init.*	Cite No.	Document Number Doc. Number-(Kind Code if Known)	Publication Date or Issue Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	US- 659,926	10/16/1900	Jacobs	, igaios rippod.
	A2	US- 906,339	12/08/1908	Tone	_
	A3	US- 960,712	06/07/1910	Saunders	
	A4	US- 1,037,999	09/10/1912	Saunders	
	A5	US- 1,107,011	08/11/1914	Allen	
	A6	US- 1,149,064	08/03/1915	Kalmus	
<u> </u>	A7	US- 1,161,620	11/23/1915	Coulter	
	A8	US- 1,192,709	07/25/1916	Tone	
	A9	US- 1,240,490	09/18/1917	Saunders et al.	
<u>.</u>	A10	US- 1,247,337	11/20/1917	Saunders et al.	
	A11	US- 1,257,356	02/26/1918	Hutchins	
	A12	US- 1,263,708	04/23/1918	Saunders et al.	
<u>.</u>	A13	US- 1,263,709	04/23/1918	Saunders et al.	
	A14	US- 1,263,710	04/23/1918	Saunders et al.	
	A15	US- 1,268,532	06/04/1918	Allen	
	A16	US- 1,268,533	06/04/1918	Allen	
	A17	US- 1,314,061	08/26/1919	Harrison	
	A18	US- 1,339,344	05/04/1920	Hutchins	
	A19	US- 1,402,714	01/03/1922	Brockbank	
	A20	US- 1,448,586	03/13/1923	Allen	
	A21	US- 1,910,444	05/23/1933	Nicholson	
	A22	US- 2,000,857	05/07/1935	Masin	
	A23	US- 2,424,645	07/29/1947	Baumann, Jr. et al.	
···	A24	US- 2,618,567	11/18/1952	Comstock, III	
	A25	US- 2,958,593	11/01/1960	Hoover et al.	
	A26	US- 2,961,296	11/22/1960	Fenerty	
	A27	US- 3,041,156	06/26/1962	Rowse et al.	
	A28	US- 3,141,747	07/21/1964	Marshall	

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			U.S. Patent	Documents	
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Init.*	No.	Doc. Number-(Kind Code if Known)	MM-DD-YYYY	or Applicant of Cited Document	Figures Appear
-	A29	US- 3,174,871	03/23/1965	Geffcken et al.	
	A30	US- 3,181,939	05/04/1965	Marshall et al.	
	A31	US- 3,216,794	11/09/1965	Roschuk	
	A32	US- 3,377,660	04/16/1968	Marshall et al.	
	A33	US- 3,498,769	03/03/1970	Coes, Jr.	
	A34	US- 3,635,739	01/18/1972	Macdowell et al.	
	A35	US- 3,646,713	03/07/1972	Marshall et al.	
	A36	US- 3,726,621	04/10/1973	Cichy	
	A37	US- 3,781,172	12/25/1973	Pett et al.	
	A38	US- 3,792,553	02/19/1974	Schleifer et al.	
	A39	US- 3,859,407	01/07/1975	Blanding et al.	
	A40	US- 3,881,282	05/06/1975	Watson	
	A41	US- 3,891,408	06/24/1975	Rowse et al.	
	A42	US- 3,893,826	07/08/1975	Quinan et al.	
	A43	US- 3,916,584	11/04/1975	Howard et al.	
	A44	US- 3,940,276	02/24/1976	Wilson	
	A45	US- 3,973,977	08/10/1976	Wilson	
	A46	US- 3,996,702	12/14/1976	Leahy	
	A47	US- 4,035,162	07/12/1977	Brothers et al.	
	A48	US- 4,049,397	09/20/1977	Bockstiegel et al.	
	A49	US- 4,059,417	11/22/1977	Ilmaier et al.	
	A50	US- 4,070,796	01/31/1978	Scott	
	A51	US- 4,073,096	02/14/1978	Ueltz et al.	
· <u> </u>	A52	US- 4,111,668	09/05/1978	Walker et al.	
<u> </u>	A53	US- 4,126,429	11/21/1978	Watson	
	A54	US- 4,140,494	02/20/1979	Coes, Jr.	
	A55	US- 4,157,898	06/12/1979	Walker et al.	
	A56	US- 4,194,887	03/25/1980	Ueltz et al.	

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	A57	US- 4,238,213	12/09/1980	Pallo et al.	
	A58	US- 4,261,706	04/14/1981	Blanding et al.	
	A59	US- 4,311,489	01/19/1982	Kressner	
·=.s/	A60	US- 4,314,827	02/09/1982	Leitheiser et al.	
	A61	US- 4,341,533	07/27/1982	Daire et al.	
	A62	US- 4,405,545	09/20/1983	Septier et al.	
	A63	US- 4,415,510	11/15/1983	Richmond	
	A64	US- 4,439,845	03/27/1984	Geohegan Jr. et al.	
	A65	US- 4,457,767	07/03/1984	Poon et al.	
	A66	US- 4,489,022	12/18/1984	Robyn et al.	
	A67	US- 4,518,397	05/21/1985	Leitheiser et al.	
	A68	US- 4,543,107	09/24/1985	Rue	
,	A69	US- 4,584,279	04/22/1986	Grabowski et al.	
	A70	US- 4,588,419	05/13/1986	Caul et al.	
	A71	US- 4,595,663	06/17/1986	Krohn et al.	
	A72	US- 4,623,364	11/18/1986	Cottringer et al.	
· · · · · · · · · · · · · · · · · · ·	A73	US- 4,652,275	03/24/1987	Bloecher et al.	
	A74	US- 4,734,104	03/29/1988	Broberg	
-	A75	US- 4,737,163	04/12/1988	Larkey	
	A76	US- 4,741,743	05/03/1988	Narayanan et al.	
	A77	US- 4,744,802	05/17/1988	Schwabel	
	A78	US- 4,751,137	06/14/1988	Halg et al.	
	A79	US- 4,752,459	06/21/1988	Pepper	
	A80	US- 4,756,746	07/12/1988	Kemp, Jr. et al.	
	A81	US- 4,762,677	08/09/1988	Dolgin	
	A82	US- 4,770,671	09/13/1988	Monroe et al.	
	A83	US- 4,780,268	10/25/1988	Papsi et al.	
	A84	US- 4,799,939	01/24/1989	Bloecher et al.	

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		Doc. Number-(Kind Code if Known)	MM-DD-YYYY		Figures Appear
	A85	US- 4,800,685	01/31/1989	Haynes. Jr.	
	A86	US- 4,881,951	11/21/1989	Wood et al.	
	A87	US- 4,898,587	02/06/1990	Mera	
	A88	US- 4,898,597	02/06/1990	Hay et al.	
	A89	US- 4,960,441	10/02/1990	Pellow et al.	
	A90	US- 4,997,461	03/05/1991	Markhoff-Matheny et al.	
	A91	US- 5,007,943	04/16/1991	Kelly et al.	
	A92	US- 5,009,675	04/23/1991	Kunz et al.	
	A93	US- 5,009,676	04/23/1991	Rue et al.	·
	A94	US- 5,011,508	04/30/1991	Wald et al.	
****	A95	US- 5,013,696	05/07/1991	Greskovich et al.	
	A96	US- 5,023,212	06/11/1991	Dubots et al.	
	A97	US- 5,038,453	08/13/1991	Kurita et al.	
	A98	US- 5,042,991	08/27/1991	Kunz et al.	
	A99	US- 5,085,671	02/04/1992	Martin et al.	
	100	US- 5,090,968	02/25/1992	Pellow	
	101	US- 5,094,672	03/10/1992	Giles, Jr. et al.	
	102	US- 5,110,332	05/05/1992	Isaksson	
	103	US- 5,118,326	06/02/1992	Lee et al.	
	104	US- 5,131,926	07/21/1992	Rostoker et al.	
``	105	US- 5,139,978	08/18/1992	Wood	
	106	US- 5,143,522	09/01/1992	Gibson et al.	
	107	US- 5,152,917	10/06/1992	Pieper et al.	
	108	US- 5,185,299	02/09/1993	Wood et al.	
	109	US- 5,194,072	03/16/1993	Rue et al.	
	1110	US- 5,201,916	04/13/1993	Berg et al.	
	1111	US- 5,203,884	04/20/1993	Buchanan et al.	
	1112	US- 5,203,886	04/20/1993	Sheldon et al.	

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	<u> </u>	Doc. Number-(Kind Code if Known)	MM-DD-YYYY		Figures Appear
	1113	US- 5,227,104	07/13/1993	Bauer	
	114	US- 5,259,147	11/09/1993	Falz et al.	
	1115	US- 5,273,566	12/18/1993	Balcar et al.	
	1116	US- 5,282,875	02/01/1994	Wood et al.	
	1117	US- 5,312,789	05/17/1994	Wood	
	1118	US- 5,336,280	08/09/1994	Dubots et al.	
	1119	US- 5,352,254	10/04/1994	Celikkaya	
	120	US- 5,366,523	11/22/1994	Rowenhorst et al.	
	121	US- 5,372,620	12/13/1994	Rowse et al.	
	122	US- 5,376,470	12/27/1994	Sprouse	
	123	US- 5,378,251	01/03/1995	Culler et al.	
	124	US- 5,395,407	03/07/1995	Cottringer et al.	
	125	US- 5,395,407 B1	08/26/1997	Cottringer et al.	
	126	US- 5,417,726	05/23/1995	Stout et al.	
	127	US- 5,427,595	06/27/1995	Pihl et al.	
	128	US- 5,429,647	07/04/1995	Larmie	
	129	US- 5,431,704	07/11/1995	Tamamaki et al.	
	130	US- 5,436,063	07/25/1995	Follett et al.	
	131	US- 5,443,906	08/22/1995	Pihl et al.	
	132	US- 5,496,386	03/05/1996	Broberg et al.	
	133	US- 5,498,269	03/12/1996	Larmie	
	134	US- 5,520,711	05/28/1996	Helmin	
-	1135	US- 5,547,479	08/20/1996	Conwell et al.	
	136	US- 5,549,962	08/27/1996	Holmes et al.	
	1137	US- 5,551,963	09/03/1996	Larmie	
.	138	US- 5,593,467	01/14/1997	Monroe	
	139	US- 5,605,870	02/25/1997	Strom-Olsen et al.	
	140	US- 5,609,706	03/11/1997	Benedict et al.	

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	141	Doc. Number-(Kind Code if Known) US- 5,641,469	06/24/1997	Garg et al.	rigules Appeal	
	142	US- 5,651,925	07/29/1997	Ashley et al.		
	143	US- 5,653,775	08/05/1997	Plovnick et al.		
	144	US- 5,665,127	09/09/1997	Moltgen et al.		
-	145	US- 5,679,067	10/21/1997	Johnson et al.		
	146	US- 5,725,162	03/10/1998	Garg et al.		
	147	US- 5,738,696	04/14/1998	Wu et al.		
	1148	US- 5,782,940	07/21/1998	Jayan et al.		
	1149	US- 5,847,865	12/08/1998	Gopinath et al.		
···	150	US- 5,863,308	01/26/1999	Qi et al.		
	151	US- 5,876,470	03/02/1999	Abrahamson		
	152	US- 5,902,763	05/11/1999	Waku et al.		
	153	US- 5,903,951	05/18/1999	Ionta et al.		
	154	US- 5,952,256	09/14/1999	Morishita et al.		
	155	US- 5,954,844	09/21/1999	Law et al.		
	156	US- 5,961,674	10/05/1999	Gagliardi et al.		
	157	US- 5,975,988	11/02/1999	Christianson		
	1158	US- 5,981,413	11/09/1999	Hale		
	1159	US- 5,981,415	11/09/1999	Waku et al.		
	1160	US- 6,054,093	04/04/2000	Zheng		
	1161	US- 6,123,743	09/26/2000	Carman et al.		
	1162	US- 6,254,981	07/03/2001	Castle		
	1163	US- 6,451,077	09/17/2002	Rosenflanz		
	164	US- 6,454,822	09/24/2002	Rosenflanz		
	1165	US- 6,458,731	10/01/2002	Rosenflanz		
	1166	US- 6,469,825	10/22/2002	Digonnet et al.		
0 ta	167	US- 6,482,758	11/19/2002	Weber et al.		
	1168	US- 6,484,539 B1	11/26/2002	Nordine et al.		

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	1169	US- 6,490,081 B1	12/03/2002	Feillens et al.		
	170	US- 6,521,004	02/18/2003	Culler et al.		
	171	US- 6,582,488	06/24/2003	Rosenflanz		
	172	US- 6,583,080	06/24/2003	Rosenflanz		
	173	US- 6,589,305	07/08/2003	Rosenflanz		
	174	US- 6,592,640	07/15/2003	Rosenflanz et al.		
	175	US- 6,596,041	07/22/2003	Rosenflanz		
	176	US- 6,607,570	08/19/2003	Rosenflanz et al.		
	177	US- 6,620,214	09/16/2003	McArdle et al.		
	178	US- 6,666,750	12/23/2003	Rosenflanz		
	179	US- 6,669,749	12/30/2003	Rosenflanz et al.		
,	180	US- 6,706,083	03/16/2004	Rosenflanz		
	181	US- Re 31,128	01/18/1983	Walker et al.		
···	182	US- Re 31,725	11/06/1984	Walker et aL.		
	183	US- 02-0066233-A1	06/06/2002	McArdle et al.		
	184	US- 02-0160694-A1	10/31/2002	Wood et al.		
	185	US- 03-0110706-A1	06/19/2003	Rosenflanz		
<u></u>	186	US- 03-0110707-A1	06/19/2003	Rosenflanz et al.		
	187	US- 03-0110708-A1	06/19/2003	Rosenflanz		
	188	US- 03-0110709-A1	06/19/2003	Rosenflanz et al.		
	1189	US- 03-0115805-A1	06/25/2003	Rosenflanz et al.		
	190	US- 03-0126802-A1	07/10/2003	Rosenflanz		
	191	US- 03-0126803-A1	07/10/2003	Rosenflanz		
	192	US- 03-0126804-A1	07/10/2003	Rosenflanz et al.		
	193	US- 03-0145525-A1	08/07/2003	Rosenflanz		
	194	US- 04-0020245-A1	02/05/2004	Rosenflanz et al.		
	1195	US- 04-0023078-A1	02/05/2004	Rosenflanz et al.		

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	B1	AT	333146	10/11/1976			Х
	B2	DD	134 638 A	03/14/1979			Х
0,000	В3	DE	20 34 011	07/09/1970			Х
•.	B4	EP	0 200 487	11/05/1986			
	B5	EP	0 291 029 A1	11/17/1988			
	B6	EP	0 291 029 B2	11/27/1996			
	B7	EP	0 408 771 A1	01/23/1991			
	B8	EP	0 469 271	02/05/1992			
	B9	EP	0 480 678 A1	04/15/1992			
	B10	EP	0 494 638	07/15/1992			
	B11	EP	0 495 536 A2	07/22/1992			
	B12	EP	0 579 281 A1	01/19/1994			
	B13	EP	0 601 453 A2	06/15/1994			Х
	B14	EP	0 647 601 A1	04/12/1995			
•	B15	EP	0 709 347	05/01/1996			
	B16	EP	0 722 919 A1	07/24/1996			
	B17	FR	1547 989	10/21/1968			X
	B18	FR	2 609 708	07/22/1988		·	Х
	B19	GB	1 121 875	07/31/1968			
	B20	GB	1 260 933 A	01/19/1972			
	B21	JP	200045128A	02/15/2000			X
							Machine
•	B22	JP	200045129A	02/15/2000			Х
							Machine
"	B23	JP	06 040765A	2/15/1994			×
							Machine
	B24	JP	59 22 7726A	12/21/1984			×
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	B25	JP	2001294480	10/23/2001			Х
		Mil.					Machine
-10-350	B26	Hei	11-189926	07/13/1999			Х
							Machine
	B27	Hei	4-119941	04/21/1992			Х
	B28	S	63-156024	06/29/1988			Х
	B29	S	63-303821	12/28/1988			Х
	B30	wo	94/14722	07/07/1994			
	B31	wo	97/16385	05/09/1997			
	B32	wo	97/25284	07/19/1997			
	B33	wo	00/34201	06/15/2000			Х
·	B34	wo	01/16047 A2	03/08/2001			
	B35	wo	01/23321 A1	04/05/2001			
	B36	wo	01/23323 A1	04/05/2001			
	B37	WO	01/27046 A1	04/19/2001			
3	B38	wo	01/56946 A	08/09/2001			_
	B39	wo	01/56947 A	08/09/2001			
	B40	wo	01/56949 A	08/09/2001			
	B41	WO .	01/56950 A	08/09/2001			
	B42	wo	02/08146 A	01/31/2002			
•	B43	SU	1455569	10/04/1996			X

		OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS
Exam. Init.*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published
	C1	Aguilar, E.A., "Processing and crystallization of rapidly solidified Al ₂ O ₃ -Y ₂ O ₃ fibres", British Ceramic Transactions, 2000, Vol. 99, No. 6, pp. 256-259.
	C2	Brewer, Luke N. et al., "Interface modification for increased fracture toughness in reaction-formed yttrium aluminum garnet/alumina eutectic composites," 1999, Vol. 14, No. 10, pp. 3907-3912.
	C3	Brockway et al. "Rapid Solidification of Ceramics a Technology Assessment", Metals and Ceramics Information Center, MCIC Report, January 1984 MCIC 84-49

*Examiner:

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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	C4	Chen, Zan-Hwey et al., "Microstructures of laser-treated Al ₂ O ₃ -ZrO ₂ -CeO ₂ composites," <u>Materials Science & Engineering A (Structural Materials: Properties, Microstructure and Processing)</u> , 1995, Vol. A196, No. 1-2, pp. 253-260.
1,04	C5	"China: Oversupply Puts Rare Earths Projects On Hold", Industrial Minerals, August, 1997, 1 page.
	C6	"China's Rare Earth Export Quota Set at 45,000 Tons", Dow Jones Interactive Internet Printout on 6/20/01 for web address "http://ptg.djnr.com/ccroot/asp/publib/story.asp"; Asia Pulse, 1/9/01, 1 page.
	C 7	"China's Rare Earth Industry In the Doldrums", Dow Jones Interactive Internet Printout on 6/20/01 for web address "http://ptg.djnr.com/ccroot/asp/publib/story.asp"; Asia Pulse, 1/28/99, 2 pages.
	C8	"China Rare Earth Information", China Rare Earth Information Center, Vol. 6, No. 4, August 2000, 3 pages.
	C9	Coutures et al., "PRODUCTION AND STUDIES OF ALUMINA BASED REFRACTORY GLASS," Mat. Res. Bull., Vol. 10, No. 6, 1975, pp 539-546.
	C10	Dialog © file 319: Chem Bus NewsBase © 2001 Royal Soc Chemistry. Abstract for "China: Oversupply Puts Rare Earths Projects On Hold", Industrial Minerals n 359, p. 10.
	C11	"ELEMENTS: China to Impose Quotas on Rare Earth Exports", Dow Jones Interactive Internet Printout on 6/20/01 for web address "http://ptg.djnr.com/ccroot/asp/publib/story.asp"; Chemical Business NewsBase, 2/4/99, 1 page.
	C12	Figs. 311, 346, 350, 354-56, 373, and 716, <u>Phase Diagrams For Ceramists</u> , The American Ceramic Society, 1964, pp. 122, 136, 138, 140, 144, 248.
	C13	Figs. 2340-44, 2363, 2370, 2374-75, 2382-83, 2385, 2387, 2390, and 2392, <u>Phase Diagrams For Ceramists</u> , 1969 Supplement, The American Ceramic Society, 1969, pp. 95-6, 100, 102-03, 105-08.
	C14	Figs. 4366-71, 4377-78, 4404-05, 4417, 4426, 4430, 4433, 4437, 4440, 4444, 4457, 4572, and 4602, <u>Phase Diagrams For Ceramists, 1975 Supplement, The American Ceramic Society, 1975, pp. 130-32, 135-36, 147, 152, 157, 159-60, 163-64, 166, 172-73, 238, 257.</u>
	C15	Figs. 5042, 5211, 5217, 5224, 5228, 5232, 5237, 5239, 5241, 5245, 5251, 5257, 5418, and 5437, <u>Phase Diagrams For Ceramists, Vol. IV</u> , The American Ceramic Society, 1981, pp. 29, 125, 127, 129-31, 133, 135-37, 139, 141, 143, 220, 228.
	C16	Fig. 6464, Phase Diagrams For Ceramists, Vol. VI, The American Ceramic Society, 1981, p. 162.
	C17	Figs. 9262, and 9264, Phase Diagrams For Ceramists, Vol. XI, Oxides, The American Ceramic Society, 1995, pp. 105-06.
	C18	Harris et al., "DURABLE 3—5 µm TRANSMITTING INFRARED WINDOW MATERIALS," Infrared Physics & Technology 39, 1998, pp. 185-201
	C19	Hedrick, J., "Rare-Earth Metals", pp. 61.1-61.6, 1997.
	C20	Hedrick, J., "Rare-Earth Metal Prices in the USA ca. 1960 to 1994", J. Alloys and Compounds, 1997, pp. 471-81.

*Examiner:	Date Considered:
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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	C21	Hrovat et al., "Preliminary data on subsolidus phase equilibria in the La ₂ O ₃ -Al ₂ O ₃ -Mn ₂ O ₃ and La ₂ O ₃ -Al ₂ O ₃ -Fe ₂ O ₃ systems", <u>Journal of Materials Science Letters</u> , Vol. 14, 1995, pp. 265-267.
	C22	Imakoa, Minoru et al., "Refractive Index and Abbe's Number of Glass of Lanthanum Borate System", Journal Ceramic Assoc. Japan, Vol. 70, No. 5, (1962), pp. 115
-	C23	"In Asia", Dow Jones Interactive Internet Printout on 6/20/01 for web address "http://ptg.djnr.com/ccroot/asp/publib/story.asp"; Engineering & Mining Journal, 2/28/00, 4 pages.
-	C24	Isobe, T. et al., "Microstructure and Thermal Stability of Al ₂ O ₃ /Y ₃ Al ₅ O ₁₂ (YAG) Eutectic Composite Prepared by an Arc Discharge Method", J. Ceram. Soc. Jap., 109, [1], 2001, pp. 66-70, Abstract in English.
	C25	Kingery, W.D., INTRODUCTION TO CERAMICS, Second Edition, Chpt. III subchapter 8.8, Glass-Ceramic Materials, pp. 368-374, (1976).
	C26	Kokubo, Tadashi et al., "Infrared Transmission of (R ₂ O or R'O)-(TiO ₂ , Nb ₂ O ₅ or Ta ₂ O ₅)-Al ₂ O ₃ Glasses", Journal of Non-Crystalline Solids 22 (1970) 125-134
	C27	Kondrashov V I et al., "Opacified Glass "Decorit" Synthesis Directions", Steklo I Keramika 2001, No. 1, pages 8-11. Title translated as "Aspects of Synthesis of Decorite Opacified Glass".
	C28	Krell, Andreas et al., "Advances in the Grinding Efficiency of Sintered Alumina Abrasives," <u>Journal of the American Ceramic Society</u> , 1996, Vol. 79, No. 3, pp. 763-769
	C29	Krokhin et al., "Synthesis of Y-Al Garnet", Glass and Ceramics, Vol. 55, Nos. 5-6, 1998, pp. 151-152.
	C30	Lakiza et al., "The Liquidus Surface In The Al ₂ O ₃ -ZrO ₂ -Y ₂ O ₃ Phase Diagram", Powder Metallurgy and Metal Ceramics, Vol. 33, No. 11-12, 1994, pp. 595-597.
	C31	Lakiza et al., "Methods Of Investigation Of Properties Of Powder Materials, Interactions In The Al ₂ O ₃ -ZrO ₂ -Y ₂ O ₃ System", <u>Powder Metallurgy and Metal Ceramics</u> , Vol. 33, Nos. 9-10, 1994, pp. 486-490.
	C32	Lakiza et al., "Powder-Material Research Methods And Properties Polythermal Sections Of The Al ₂ O ₃ -ZrO ₂ -Y ₂ O ₃ Phase Diagram", <u>Powder Metallurgy and Metal Ceramics</u> , Vol. 34, No. 11-12, 1995, pp. 655-659.
	C33	Lakiza et al., "Solidus Surface And Phase Equilibria During The Solidification Of Alloys In The Al ₂ O ₃ -ZrO ₂ -Y ₂ O ₃ System", <u>Powder Metallurgy and Metal Ceramics</u> , Vol. 34, Nos. 1-2, 1995, pp. 64-67
<u> </u>	C34	Lakiz and Lopato, "Metastable Phase Relationships In The System Al ₂ O ₃ -ZrO ₂ -Y ₂ O ₃ ", <u>Powder Metallurgy and Metal Ceramics</u> , Vol. 35, Nos. 11-12, 1996, pp. 621-626.
	C35	Mah, Tai-I1 et al., "Processing, Microstructure, and Strength of Alumina-YAG Eutectic Polycrystals", J. Am. Ceram. Soc., 83, [8], 2000, pp. 2088-90.
	C36	McKittrick, Joanna, et al., "Non-stoichiometry and defect structures in rapidly solidified MgO-Al ₂ O ₃ -ZrO ₂ ternary eutectics," <u>Materials Science and Engineering</u> A231 (1997) 90-97.
	C37	McMillan, P.W., Glass-Ceramics, Academic Press, Inc., 2 nd Edition (1979)

kaminer:	*Examiner:
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Date Considered:

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

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	C38	"Phase Identification of $Al_2O_3/RE_3Al_5O_{12}$ and $Al_2O_3/REA10_3$ (RE = Sm-Lu, Y) Eutectics", J. Crystal Growth, 218, 2000, pp. 67-73.
	C39	"Prices: Minerals", Asian Ceramics & Glass, Jan. 2001, 2 pages.
	C40	"Rare Earths: An Industry Review and Market Outlook – Part 1", Dow Jones Interactive Internet Printout on 6/20/01 for web address "http://ptg.djnr.com/ccroot/asp/publib/story.asp"; Chemical Business NewsBase, 12/8/00, 2 pages.
	C41	"Rare Earth – Market Confusion Inevitable Due to China's Unstable Supply", Japan Chemical Week, Vol. 41, No. 2080, July 6, 2000, pp. 6-7.
-1	C42	"Rare Earth Prices and Market Outlook", Dow Jones Interactive Internet Printout on 6/20/01 for web address "http://ptg.djnr.com/ccroot/asp/publib/story.asp"; Chemical Business NewsBase, 5/27/99, 2 pages.
	C43	Rodriquez, Louise, "Rare Earths Prices Recover Despite China's Overcapacity", America Metal Market, Vol. 109, No. 14, Jan. 22, 2001, p. 13.
	C44	Shishido et al., "Gd ₃ Al ₅ O ₁₂ Phase Obtained by Crystallization of Amorphous Gd ₂ O ₃ . ⁵ / ₃ Al ₂ O ₃ ," <u>Journal of the American Ceramic Society</u> , Vol. 61, No. 7-8, JulAug. 1978, pp. 373-74.
	C45	Stankus, S. V. et al., "Crystallization and Thermal Properties of Al ₂ O ₃ -Y ₂ O ₃ Melts", J. Crystal Growth, 167, 1996, pp. 165-70.
	C46	Stookey. S. D., "Ceramics Made by Nucleation of Glass-Comparison of Microstructure and Properties with Sintered Ceramics, The American Ceramic Society, (1992), pp. 1-4
	C47	Suzuki et al., "RAPID QUENCHING ON THE BINARY SYSTEMS OF HIGH TEMPERATURE OXIDES, "Mat. Res. Bull., Vol 9, 1974, pp. 745-54.
	C48	Toropov et al., "Phase Equilibria in the Yttrium Oxide-Alumina System", <u>Bulletin of the Academy of Sciences, USSR</u> , Division of Chemical Science, No. 7, July, 1964, pp. 1076-1081, A translation of <u>Seriya Khimicheskaya</u> .
	C49	"Traders' View on Chemical Business (Part 2): Rare Earth: Market Confusion Inevitable Due to China's Unstable Supply", Dow Jones Interactive Internet Printout on 6/20/01 for web address "http://ptg.djnr.com/ccroot/asp/publib/story.asp"; Chemical Business NewsBase, 8/10/00, 2 pages.
*	C50	Varshneya, Arun K., "Fundamentsal of Inorganic Glasses", pp. 425-427 (1994).
	C51	van den Hoven et al., "NET OPTICAL GAIN AT 1.53 µm in Er-DOPED Al₂O₃ WAVEGUIDES ON SILICON," Appl. Phys. Lett. 68 (14), April 1, 1966, pp. 1886-88.
	C52	Volkova, I. Yu et al., Abstract for "Kinetics of Nonisothermal Sintering of Some Eutectic Oxide Compositions," 1986 (abstract from Database Chemabs 'Online! Chemical Abstracts Service, Columbus, Ohio, US).
· · · <u>-</u>	C53	Waku et al., "A ductile ceramic eutectic composite with high strength at 1,873 K", Nature, Vol. 389, September 1997, pp. 49-52.

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	QIIIII I	GI.	

Date Considered:

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

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	C54	Waku, Yoshiharu, "A New Ceramic Eutectic Composite with High Strength at 1873 K", Advanced Materials, Vol. 10, No. 8, 1998, pp. 615-617.
	C55	Waku et al., "High-temperature strength and thermal stability of a unidirectionally solidified Al ₂ O ₃ /YAG eutectic composite", pp. 1217-1225
	C56	Waku et al., "Sapphire matrix composites reinforced with single crystal VAG phases", <u>Journal of Materials Science</u> , Vol. 31, 1996, pp. 4663-4670.
	C57	Waku, Yoshiharu, et al., "A jelly-like ceramic fiber at 1193 K", Mat Res Innovat, 2000, Vol. 3, pp. 185-189
	C58	Wang, S. et al., "Divorced Eutectic and Interface Characteristics in a Solidified YAG-Spinel Composite With Spinel-Rich Composition", J. Mat. Sci., 35, 2000, pp. 2757-61.
	C59	Wang, Shuqiang et al., "Eutectic Precipitation of the Spinel Solid Solution-Yttrium Aluminum Garnet (YAG) System," Journal of the American Ceramic Society, 1998, Vol. 81, No. 1, pp. 263-265.
	C60	Weber et al., DEVICE MATERIALS BASED ON Er-, Ho-, Tm-, and Yb-DOPED RARE EARTH ALUMINUM OXIDE (REA1™) GLASS," reference obtained in 2003, and believed to be based on a talk presented January 28, 2003 (See website http://www.spie.org/Conferences/Programs/03/pw/opto/index.cfm?fuseaction=4999 , pp. 1 and 2 of 5).
	C61	Weber et al., "RARE EARTH OXIDE-ALUMINUM OXIDE GLASSES FOR MID-RANGE IR DEVICES," reference obtained in 2003, and believed to be based on a talk presented January 25, 2003 (See website http://www.spie.org/Conferences/Programs/03/pw/bios/index.cfm?fuseaction=4957 , pp. 1 and 4 of 6).
	C62	Weber, J.K. Richard et al., "Glass fibres of pure and erbium- or neodymium-doped yttria-alumina compositions", Nature, June 25, 1998, Vol. 393, pp. 769-771
	C63	Weber, J.K. Richard et al., "Glass Formation and Polyamorphism in Rare-Earth Oxide-Aluminum Oxide Compositions", J. American Ceramic Society, 83 [8], 2000, 1868-1872
	C64	Yajima et al., GLASS FORMATION IN THE Ln-Al-O SYSTEM, (Ln: LANTHANOID AND YTTRIUM ELEMENTS), Chemistry Letters, 1973, pp. 1327-1330.
	C65	Yajima et al., "UNUSUAL GLASS FORMATION IN THE A1-Nd-O SYSTEM," Chemistry Letters (published by the Chemical Society of Japan), 1973, pp. 741-742
	C66	Yan et al., "ERBIUM-DOPED PHOSPHATE GLASS WAVEGUIDE ON SILICON WITH 4.1 dB/cm GAIN AT 1.535 µm," Appl. Phys. Lett, 71 (20), November 17, 1997.
•	C67	Yang and Zhu, "Thermo-Mechanical Stability Of Directionally Solidified Al ₂ O ₃ -ZrO ₂ (Y ₂ O ₃) Eutectic Fibers", Scripta Materialia, Vol. 36, No. 8, 1997, pp. 961-965.
	C68	Yau, W., "Increase in Value of Rare Earth Products Boosts Yixing Xinwei", South China Morning Post, April 12, 2000, 2 pages.

*Examine	er:
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Date Considered:

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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	C69	U.S. Patent Application entitled "Fused Al ₂ O ₃ -Y ₂ O ₃ -ZrO ₂ Eutectic Abrasive Particles, Abrasive Articles, And Methods Of Making And Using The Same", filed July 19, 2000, Rosenflanz having U.S. Serial No. 09/618,876 (Attorney Docket No. 55763US002).		
	C70	U.S. Patent Application entitled, "Method of Making Ceramic Articles", filed August 2, 2002, Rosenflanz having U.S. Serial No. 10/211,481 (Attorney Docket No. 56938US004).		
	C71	U.S. Patent Application entitled "Methods of Making Ceramic Particles," filed February 5, 2003, Rosenflanz, having a U.S. Serial No. 10/358772 (Attorney Docket No. 58257US002)		
	C72	U.S. Patent Application entitled "Methods of Making Ceramics", filed February 5, 2003, Anderson et al., having a U.S. Serial No. 10/358765 (Attorney Docket No. 58258US002)		
	C73	U.S. Patent Application entitled "Ceramics and Methods of Making the Same", filed February 5, 2003, Celikkaya et al., having a U.S. Serial No. 10/358910 (Attorney Docket No. 58325US002)		
	C74	U.S. Patent Application entitled "Al ₂ O ₃ -La ₂ O ₃ -Y ₂ O ₃ -MgO Ceramics, and Methods of Making the Same", filed February 5, 2003, Celikkaya et al., having a U.S. Serial No. 10/358855 (Attorney Docket No. 58352US002)		
	C75	U.S. Application entitled "Use of Ceramics In Dental And Orthodontic Applications", filed February 5, 2003, having U.S. Serial No. 10/358,856 (Attorney Docket No. 58350US002)		
	C76	U.S. Patent Application entitled "Methods of Making Al ₂ O ₃ -SiO ₂ Ceramics", filed February 5, 2003, Celikkaya et al. having a U.S. Serial No. 10/358,708 (Attorney Docket No. 58353US002)		
	C77	U.S. Application entitled "Use of Glasses Containing Rare Earth Oxide, Alumina, and Zirconia And Dopant In Optical Waveguides", filed April 28, 2003, having U.S. Serial No. 10/425,039 (Attorney Docket No. 58435US002)		
	C78	U.S. Application entitled "Methods of Making Ceramic Particles", filed September 5, 2003, having U.S. Serial No. 10/655729 (Attorney Docket No. 58790US002)		
	C79	U.S. Application entitled "Methods of Making Ceramics Comprising Al ₂ O ₃ , REO, ZrO ₂ and/or HfO ₂ and Nb ₂ O ₅ and/or Ta ₂ O ₅ ", filed September 18, 2003, having U.S. Serial No. 10/666615 (Attorney Docket No. 58354US002)		
	C80	U.S. Application entitled "Ceramics Comprising Al ₂ O ₃ , REO, ZrO ₂ and/or HfO ₂ , and Nb ₂ O ₅ and/or Ta ₂ O ₅ , and Methods of Making The Same", filed September 18, 2003, having U.S. Serial No. 10/666212 (Attorney Docket No. 58807US002)		
	C81	U.S. Application entitled "Agglomerate Abrasive Grain and a Method of Making the Same", filed February 11, 2004, having U.S. Serial No. 10/776156 (Attorney Docket No. 55304US016)		

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